than the overall loss for the P-polarized light after two passes through said enhanced volume phase grating at said nominal free-space wavelength, thereby minimizing the maximum PDL in a two-pass design.

Abstract of Disclosure

[] An enhanced volume phase diffraction grating provides high dispersion, uniformly high diffraction efficiency and equal diffraction efficiencies for all polarizations across a wide range of wavelengths. The thickness of the volume phase material and the modulation of its refractive index are jointly established to provide equalization of diffraction efficiencies for all polarizations over a wide range of wavelengths. The equalization occurs where the S and P diffraction efficiencies are both at a maximum.

Figures